



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.       | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------------|------------------|
| 10/680,749      | 10/07/2003  | Gerd Winkler         | 2000P07779US02;60,426-623 | 5363             |

24500 7590 08/30/2004

SIEMENS CORPORATION  
INTELLECTUAL PROPERTY LAW DEPARTMENT  
170 WOOD AVENUE SOUTH  
ISELIN, NJ 08830

EXAMINER

HERNANDEZ, OLGA

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

3661

DATE MAILED: 08/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/680,749

Applicant(s)

WINKLER, GERD

Examiner

Olga Hernandez

Art Unit

3661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 01 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 25-49 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 25-46 is/are rejected.
- 7) ☒ Claim(s) 46-49 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION*****Response to Arguments***

Applicant's arguments filed 7/1/04 have been fully considered but they are not persuasive. The applicant argues that Blackburn does not teach mapping the weight signals into a virtual matrix; and determining seat occupant weight based on the virtual matrix. The examiner disagrees. In column 9, lines 57-65, Blackburn discloses weight sensor including an  $N * M$  array (virtual matrix) of individual sensors and individual weight sensor. The array with the position and weight sensors alternately positioned in the array in checkerboard pattern. Further, in column 11, lines 15-25, Blackburn discloses data stored in a look-up table (virtual matrix same as array), where is the same as mapping the weight signals into a virtual matrix; and determining seat occupant weight based on the virtual matrix.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 25-28, 30-36, 38-39, 41-42 are rejected under 35 U.S.C. 102(b) as being anticipated by Blackburn et al (5,624,132).

As per claims 25, 35 and 41, Blackburn discloses:

- mounting a plurality of sensors within a seat structure (figures 9-11, 15 and 23);

Art Unit: 3661

- generating a plurality of occupant weight signals from the sensors in response to a weight force applied to the seat structure (column 4, lines 55-61);
- mapping the weight signals into a virtual matrix (column 9, lines 57-65); and
- determining seat occupant weight based on the virtual matrix (column 11, lines 15-25).

As per claims 26 and 39, Blackburn discloses classifying each seat occupant into one of a plurality of predetermined occupant weight classes (columns 11 and 14).

As per claims 27 and 39, Blackburn discloses providing seat occupant weight classification to a restraint control (columns 11 and 14).

As per claim 28, Blackburn discloses mounting the sensors in a non-symmetrical pattern (figure 10).

As per claims 30 and , Blackburn discloses generating a virtual matrix to define an optimal pattern having an optimal number of seat sensor positions (figures 10 and 23, column 9, lines 56-65).

As per claim 31, Blackburn discloses providing hardware for receiving the occupant weight signals, storing the virtual matrix and mapping the weight signals into the virtual matrix (column 9, lines 57-65 and figures 10 and 23).

As per claim 33, Blackburn discloses mounting the sensors into one of multiple different seat sensors configurations and further including using identical hardware for each different seat sensor configuration (figure 10).

Art Unit: 3661

As per claims 32 and 36, Blackburn discloses mounting the sensors into one of multiple different seat sensors configurations and further including using common hardware for each different seat sensor configuration (figure 10).

As per claim 22, it is inherent to use any means to perform the same function, because that is just routine in the art.

As per claims 34 and 38, Blackburn discloses a control unit including a printed circuit board having a plurality of connectors for attachment to the sensors and a central processing unit for generating the virtual matrix and mapping the weight signals into the virtual matrix (column 9, lines 57-65, column 11, lines 15-25 and figures 10 and 23).

As per claim 42, Blackburn discloses mounting the sensors in a predetermined sensor configuration (figure 10).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Blackburn et al (5,624,132) in view of Steffens, Jr. et al (5,626,359).

As per claim 24, Blackburn does not teach a plurality of predetermined occupant weight classes. However, Steffens teaches it in column 4, line 55 through column 5, line 25). Therefore, it would have been obvious to one of ordinary skill in the art to combine the aforementioned references in order to improve the deployment of the air bag.

Art Unit: 3661

5. Claims 29, 37, 40, 43, 44, 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blackburn (5,624,132).

As per claim 29, Blackburn does not use symmetrical pattern. However, it would have been obvious to one of ordinary skill in the art to use it in order to provide different alternatives.

As per claim 37, Blackburn does not specify the use of the memory in the control unit. However, it would have been obvious to one skill in the art that a system will not operate without a memory device, which it would have been obvious to one skill in the art to substitute a means for another means that perform the same function in order to enhance system response.

As per claim 44, Blackburn teaches the no limitation of the arrays use; therefore, it can be a difference between a predetermined sensor configuration and the theoretical sensor configuration (column 9, lines 57-65).

As per claims 40, 43 and 45, it would have been obvious to one of ordinary skill in the art to assign values to the theoretical sensor configuration to be considered the virtual matrix in order to have at least one value in order to work properly.

***Allowable Subject Matter***

6. Claims 46- 49 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

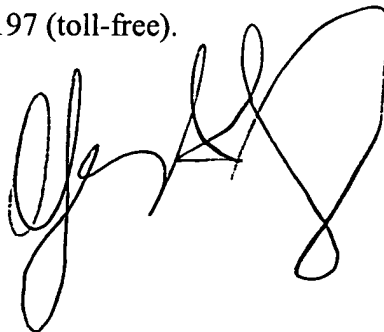
Art Unit: 3661

*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olga Hernandez whose telephone number is (703) 305-0918. The examiner can normally be reached on Monday through Friday from 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William A. Cuchlinski can be reached on (703) 308-3873. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Olga Hernandez', with a large, stylized loop at the end.

Olga Hernandez  
Examiner  
Art Unit 3661